What is claimed is:

1. A system, comprising:

a first executing process that:

implements a first model to simulate a first subsystem, the first model being programmed in a first language and having a first state variable; and

sends a first series of state-related messages, each message reflecting information relating to the value of the first state variable at a different point t_m in simulation time in the first model; and

a second executing process that:

receives said first series of state-related messages; and

implements a second model to simulate a second subsystem, the second model being programmed in a second language and taking as an input the value of the first state variable from said first series of state-related messages.

2. The system of claim 1, wherein:

the second model has a second state variable;

said second process further sends a second series of state-related messages, each message reflecting information relating to the value of the second state variable at a different point t_n in simulation time in the first model;

said first process further receives said second series of state-related messages; and

the first model takes as an input the value of the second state variable from said second series of state-related messages.

3. The system of claim 2, wherein for at least a first message in said first series of state-related messages, said first message reflecting information relating to the value of the first state variable at point t_1 in simulation time in the first model, there is a second message in said second series of state-related messages that reflects the value of the second state variable at point t_1 in simulation time in the first model.

4. The system of claim 2, wherein for at least a first message in a series of state-related messages, said first message reflecting the value of the first state variable at point t_1 in simulation time, there is no second message in said second series of state-related messages that reflects the value of the second state variable at point t_1 in simulation time.

5. The system of claim 1, wherein:

said first series of state-related messages comprises

a first message reflecting information relating to the value of the first state variable at time t_1 in simulation time in the first model;

a second message reflecting information relating to the value of the first state variable at time t_2 in simulation time in the first model; and

a third message reflecting information relating to the value of the first state variable at time t_3 in simulation time in the first model; and

wherein the first message, second message, and third message are consecutive within said first series of state-related messages; and $t_2-t_1 = t_3-t_2$.

6. The system of claim 1, wherein:

said first series of state-related messages comprises

a first message reflecting information relating to the value of the first state variable at time t_1 in simulation time in the first model;

a second message reflecting information relating to the value of the first state variable at time t_2 in simulation time in the first model; and

a third message reflecting information relating to the value of the first state variable at time t_3 in simulation time in the first model; and

wherein the first message, second message, and third message are consecutive within said first series of state-related messages; and $t_2-t_1 \neq t_3-t_2$.

7. The system of claim 1, wherein:

said first set of programming instructions exposes a first interface for the first model, where said first interface:

prevents access by said second set of programming instructions to a first substantial portion of the first model, and

allows access by said second set of programming instructions to a second substantial portion of the first model; and

said second set of programming instructions exposes a second interface for the second model, where said second interface:

prevents access by said first set of programming instructions to a first substantial portion of the second model, and

allows access by said first set of programming instructions to a second substantial portion of the second model.

8. The system of claim 1, wherein

the first model has a third state variable;

each message in said first series of state-related messages further reflects information relating to the value of the third state variable at point t_m in simulation time; and

the second model also takes the third state variable as an input from said first series of state-related messages.

9. A method for simulating operation of a physical system having a plurality of physical subsystems, comprising:

simulating a first physical subsystem;

accepting a request for export of information relating to n state-related variables that characterize the state of the first physical subsystem in said simulating;

sending a first series of state-related messages, each message containing information relating to the value of at least one of the n state variables; and

simulating a second physical subsystem; wherein:

the request is made in conjunction with said simulating a second physical subsystem;

the first physical subsystem interacts with the second physical subsystem; and

the at least one state variable characterizes at least a portion of the interaction between the first physical subsystem and the second physical subsystem.

10. The method of claim 9, wherein:

said simulating a first physical subsystem is performed on a first processor, and

said simulating a second physical subsystem is performed on the first processor.

11. The method of claim 9, wherein:

said simulating a first physical subsystem is performed on a first processor, and

said simulating a second physical subsystem is performed on a second processor.

12. The method of claim 9, wherein n is at least two.

13. The method of claim 12, wherein n is at least four.

14. The method of claim 12, wherein at least one message in the first series of state-related messages contains information relating to the values of each of the n state variables.

15. The method of claim 12, wherein at least one message in the first series of state-related messages contains information relating to the values of a first proper subset of the set containing all n state variables.

16. The method of claim 15, further comprising sending a third series of state-related messages, wherein:

at least one message in the third series of state-related messages contains information relating to the values of a second proper subset of the set containing all n state variables, and

the second proper subset is different from the first proper subset.

17. The method of claim 16, wherein:

the messages in the first series of state-related messages are sampled at a first rate in simulation time in the first model;

the messages in the third series of state-related messages are sampled at a second rate in simulation time in the first model; and

the first rate and the second rate are not equal.

18. The method of claim 16, wherein:

the messages in the first series of state-related messages are sampled at a first rate in simulation time in the first model;

the messages in the third series of state-related messages are sampled at a second rate in simulation time in the first model; and

the first rate and the second rate are equal.

19. The method of claim 9, wherein:

a given process makes the request; and

said sending directs the first series of state-related messages to a process different from the given process.

20. The method of claim 9, further comprising:

receiving the first series of state-related messages in a first output process in communication with a first output device; and

sending to the first output device a first set of information carried by a plurality of messages in the first series of state-related messages; and

wherein the first output device is in communication with the first output process.

21. The method of claim 20, wherein the first output device is a monitor.

22. The method of claim 20, wherein the first output device is a printer.

23. The method of claim 20, wherein the first output device stores the first set of information in a recordable medium.

24. The system of claim 20, wherein said displaying comprises graphing a function of the first state variable versus time.

25. The method of claim 20, further comprising:

receiving a second series of state-related messages in the first output process; and

sending to the first output device a second set of information carried by a plurality of messages in the second series of state-related messages; and

wherein said sending steps comprise outputting time information associating the first set of information and the second set of information with a system time.

26. The method of claim 20, further comprising:

receiving a second series of state-related messages in a second output process, which is in communication with a second output device; and

outputting to the second output device a second set of information carried by a plurality of messages in the second series of state-related messages;

wherein said sending comprises associating the first set of information with a system time; and

said outputting comprises associating the second set of information with the system time.

27. A system, comprising:

a first computer-readable medium encoded with programming instructions executable in a first process to:

implement a first simulation model;

accept a first command signal; and

manage the first simulation model based on the first command signal;

a second computer-readable medium encoded with a second set of programming instructions executable in a second process to:

implement a second simulation model;

accept a second command signal; and

manage the second simulation model based on the second command signal; and

a third computer-readable medium encoded with a third set of programming instructions executable in a third process to:

send the first command signal to said first process; and

send the second command signal to said second process.

28. The system of claim 27, wherein said managing steps are synchronized to a common system time.